

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application. Where claims have been amended and/or canceled, such amendments and/or cancellations are done without prejudice and/or waiver and/or disclaimer to the claimed and/or disclosed subject matter, and Applicants reserve the right to claim this subject matter and/or other disclosed subject matter in a continuing application.

1. (original) A data storage subsystem, comprising:
three data storage units;
three check storage units; and
an array controller coupled to the three data storage units and the three check storage units, the array controller determining the contents of the check storage units so that any three erasures of the data storage units and the check storage units can be corrected by the array controller.
2. (original) The data storage subsystem according to claim 1, wherein information is stored on the data storage subsystem as a symmetric Maximum Distance Separation code.
3. (currently amended) The data storage subsystem according to claim 2, wherein the Maximum Distance Separation code comprises a Winograd code.
4. (currently amended) The data storage subsystem according to claim 2, wherein the Maximum Distance Separation code comprises a Reed-Solomon code.
5. (currently amended) The data storage subsystem according to claim 2, wherein the Maximum Distance Separation code comprises an EVENODD code.
6. (currently amended) The data storage subsystem according to claim 2, wherein

the Maximum Distance Separation code comprises~~is~~ a derivative of an EVENODD code.

7. (original) The data storage subsystem according to claim 1, wherein the array controller updates a block of data contained in any one of the data storage units and the check storage units using only six IO operations while determining the contents of the check storage units so that any three erasures of the data storage units and the check storage units can be corrected by the array controller.

8. (original) The data storage subsystem according to claim 7, wherein two of the IO operations are read operations and four of the IO operations are write operations.

9. (original) The data storage subsystem according to claim 7, wherein the read operations read data from the data storage units that are not being updated, and the four write operations write data to the data storage unit being updated and to the three check storage units.

10. (currently amended) The data storage subsystem according to claim 1, wherein failure of any three data storage units and check storage units ~~failures~~ can occur before data stored on the data storage subsystem is lost.

11. (original) The data storage subsystem according to claim 1, wherein data is recoverable from a partially readable storage unit.

12. (currently amended) The data storage subsystem according to claim 1, wherein the array controller can recover any data stored on the data storage subsystem when all three data storage units have failed.

13. (withdrawn) A method of updating data stored on a data storage subsystem, the data storage subsystem including three data storage units, three check storage units and an array controller coupled to the three data storage units and the three check storage units, the array

controller determining the contents of the check storage units so that any three erasures of the data storage units and the check storage units can be corrected by the array controller, the method comprising steps of:

reading complementary data from the two data storage units that are not being updated; and

writing data to the data storage unit being updated and to the three check storage units.

14. (withdrawn) The method according to claim 13, wherein information is stored on the data storage subsystem as a symmetric Maximum Distance Separation code.

15. (withdrawn) The method according to claim 14, wherein the Maximum Distance Separation code is a Winograd code.

16. (withdrawn) The method according to claim 14, wherein the Maximum Distance Separation code is a Reed-Solomon code.

17. (withdrawn) The method according to claim 14, wherein the Maximum Distance Separation code is an EVENODD code.

18. (withdrawn) The method according to claim 14, wherein the Maximum Distance Separation code is a derivative of an EVENODD code.

19. (withdrawn) The method according to claim 13, wherein failure of any three data storage units and check storage units failures can be occur before data stored on the data storage subsystem is lost.

20. (withdrawn) The method according to claim 13, further comprising a step of recovering data from a partially readable storage unit.